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(56) Documents Cited

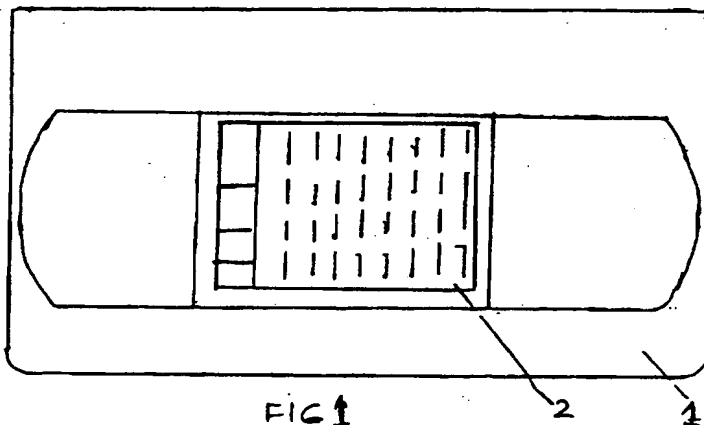
WO 93/10536 A1 WO 93/08571 A1 WO 93/08568 A1  
WO 89/10615 A1 US 4935611 A US 4841386 A

(58) Field of Search

UK CL (Edition N) B8M MFBA MFEX MFF MFX, G5R  
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ONLINE: WPI

(54) **Programmable video cassette with built-in memory**

(57) A video cassette 1 incorporating a key pad 2 and a memory is disclosed. The cassette can be programmed independently of the player, the operation and/or programming of which is controlled upon insertion of the cassette. Unauthorized access to the cassette can be prevented using a security code whilst tampering with cassette will release a chemical which destroys the tape.



1. VIDEO CASSETTE  
2. VIDEO CASSETTE CONTROL (SMART) SYSTEM (SEE FIG 2 FOR DETAILS).

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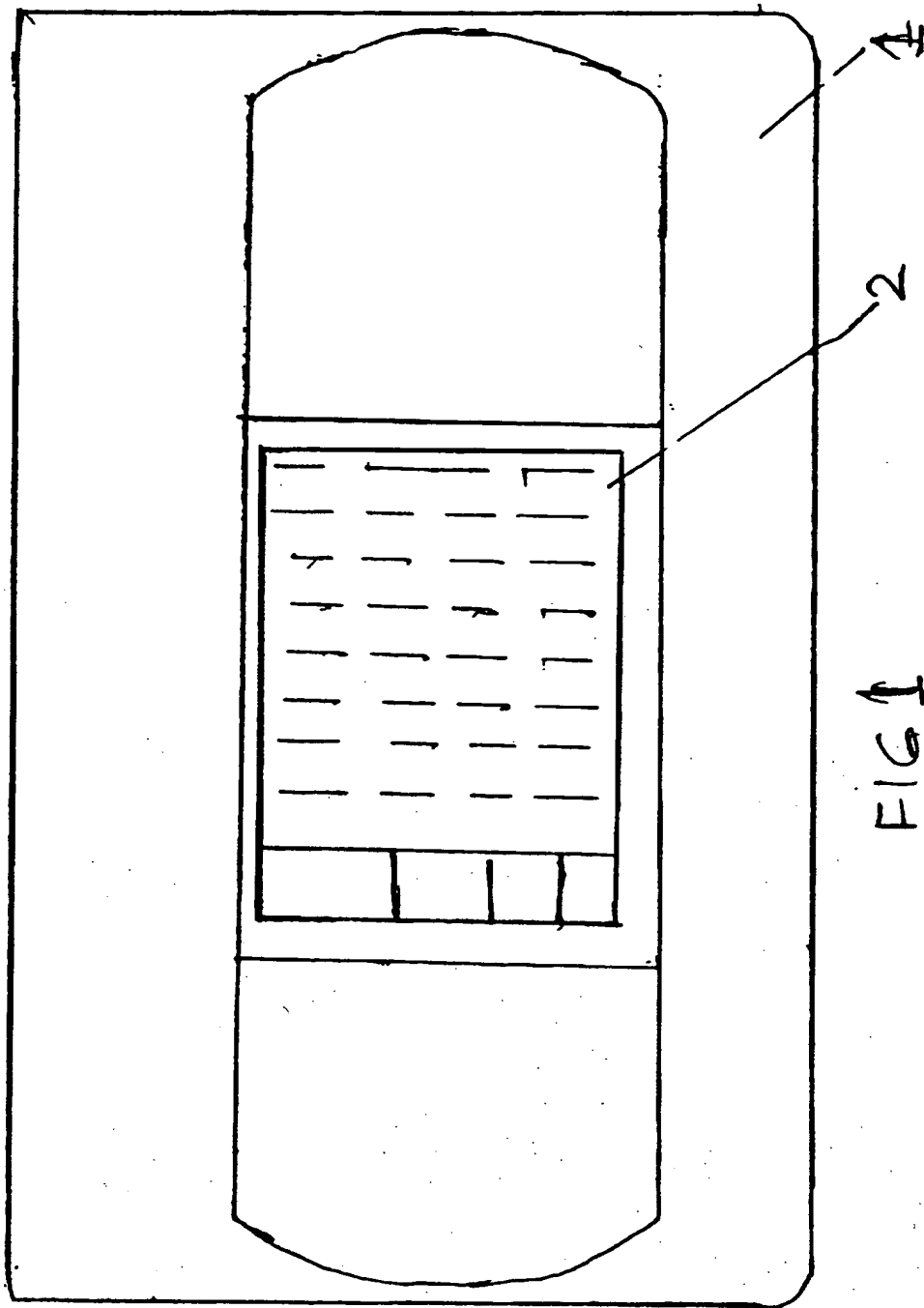


FIG 1

1. VIDEO CASSETTE
2. VIDEO CASSETTE CONTROL (SMART) SYSTEM (SEE FIG 2 FOR DETAILS).

1. BATTERY
2. DISPLAY
3. MICROCHIP & OUTPUT CONTROL
4. PROGRAMMING / CONTROL BOARD

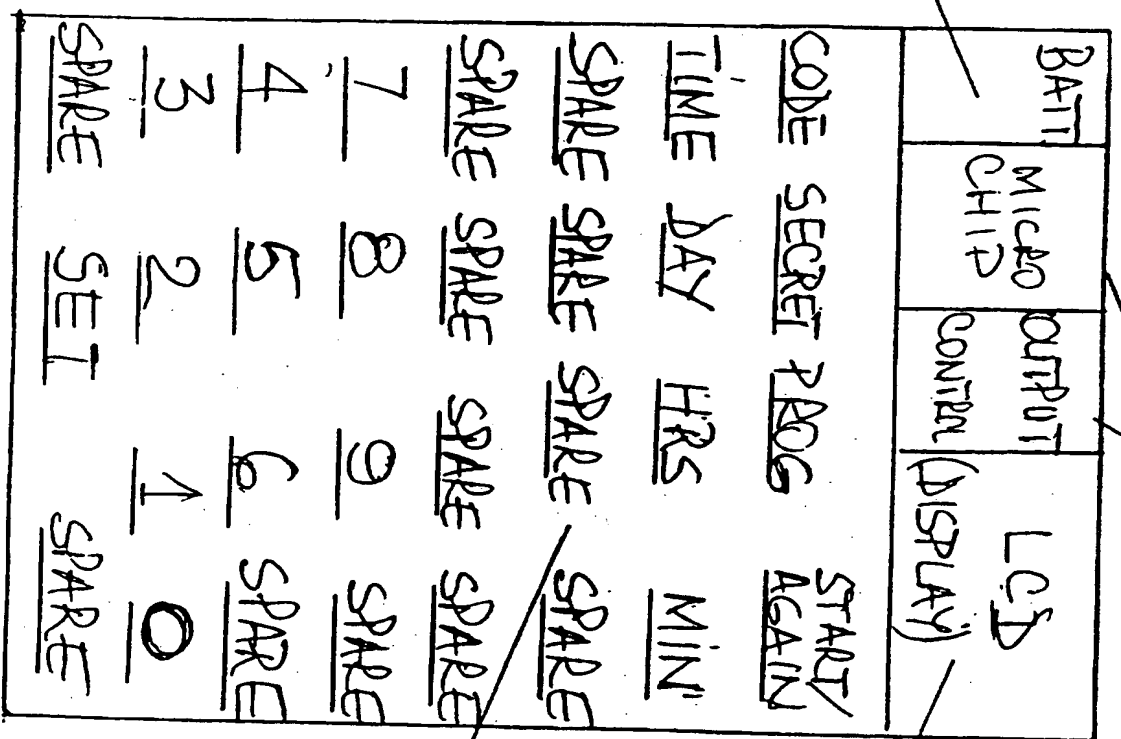
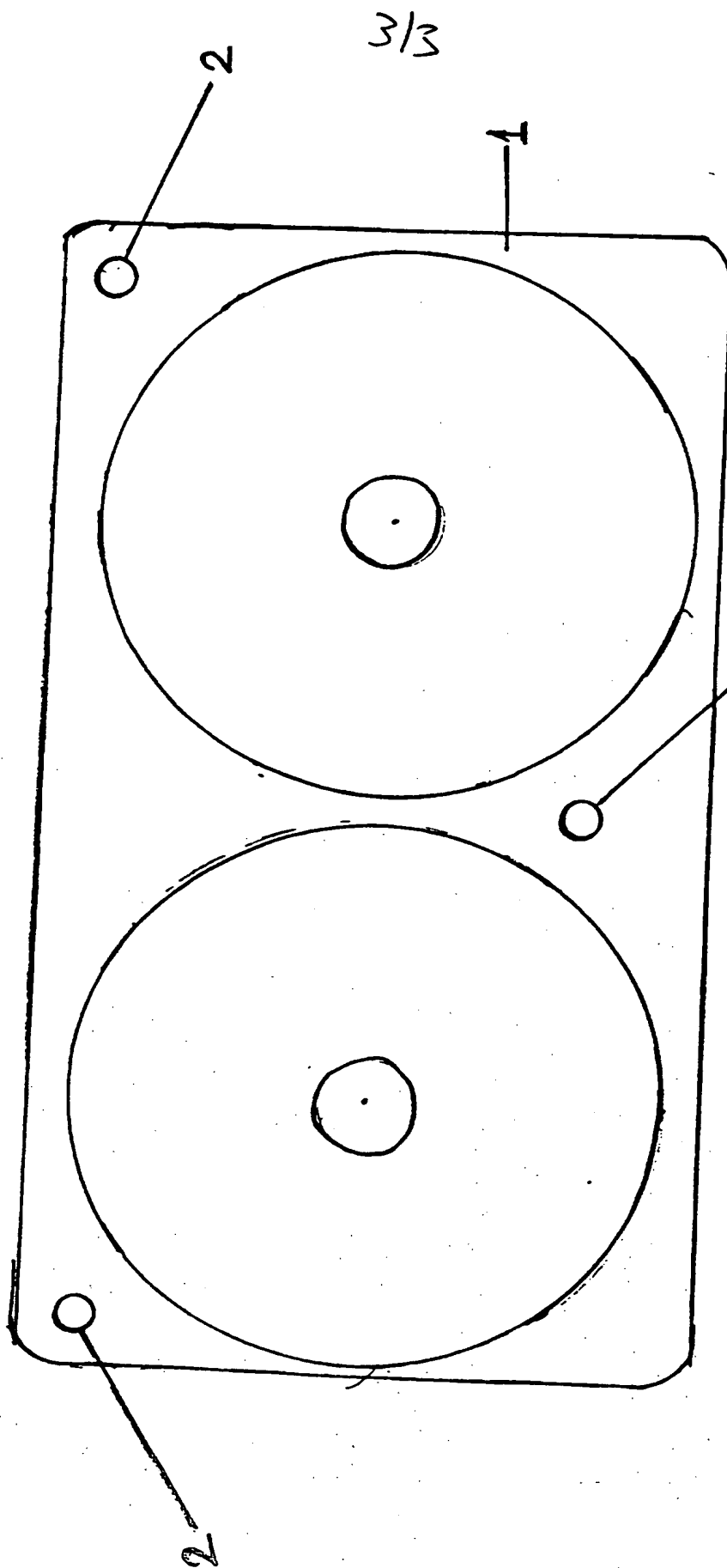


FIG 2.

FIG 3



1 VIDEO CASSETTE (INSIDE VIEW)

2 SCREW HOLES WHERE TAPE EATING CHEMICAL IS PLACED.

**Programmable (Smart) Video Cassette with built in security.**

This invention relates to a Programmable (Smart) Video Cassette ( or Video Tape as they are commonly known).

Video Cassettes are very well known and widely used consisting mainly from a case, a magnetic videotape and a moving/driving mechanism. A video cassette is inserted into a Video recorder either for recording or playback. All the commands for recording and play back are within the recording machine and as such the video cassette is a "dumb" component of the recording/playback process, as well as being extremely easy to copy or pirate.

According to this present invention the video cassette seizes to be a dumb participant in the process, and the processes of recording/playback, as well as security coding to prevent un-authorized use or copying are incorporated into the cassette itself. A microchip with a command board and a source of energy for memorising and passing on commands is incorporated into the body of the video cassette. (Please see sketch 1).

Instead of programming the videorecorder, the same commands are stored directly into the video cassette microchip via the digital control panel (similar to that of a calculator), as for instance inputting the 'programme number' for Video Plus (22595 for News at Ten on 8/08/95).

When inserted into the video recorder or other suitable mechanisms the microchip in the video cassette will automatically transmit or "be read" by the video recorder which will proceed accordingly. In effect the object of this particular type of video cassette is to transfer most of the functions of a video recorder to the video cassette itself with the added advantage of extra features which are not to be found on a video recorder. Any security code could be incorporated to allow the tape to be played or not, and the system incorporates a Safe/Protect/Break mechanism to protect against illegal use.

The coding of the microchip could also be used to make sure that the video tape could not be pirated.

The microchip could be coded to allow the tape to be played only by authorised persons/machines with corresponding codes.

A tape carousel (subject of a different patent application) enables more than one tape to be played, or recorded by being pre-programmed. The advantage of this is that one could record a multitude of programmes at different times without being restricted by the length of the tape.

The safety system incorporates a mechanical system (see fig 3) which prevents the tape being open and transferred to a non programmable carcass and as such copied or viewed. If there is an attempt to undo or force the screws holding the tape carcass, a small amount of liquid, non -toxic but it will ruin the tape by reacting with it and as such rendering it useless.

## **CLAIMS**

1. A programmable (smart) video cassettetape comprising a mechanical part (battery, LCD display, on/off switch, connector) an electrical part ( 32 or more pad keys) and microchip with software pre rogrammed and programable as in fig 1.

All the relevant functions for a video cassette as recording, play back, plus coded security stoping un-authorized use or copying, are programmed either by using individual programming of time and Channel using the key pad, which is understood by the chip through software, or using the number coding of the system known as 'video-plus'; the micro chip, is in return 'read' by the video recorder or other devices either by infra red or mechanical connection, or is 'read' directly.

2. A 'smart' video-cassette with programmable system that prevents un-authorized use of the video casstte in any form, including un-authorized play back or recording or copying of the 'smart' video cassette.

3. A 'smart' video cassette with built-in security system that renders the tape unusable should tampering occur, by releasing non-toxic, plastic 'eating' chemical as in fig. 3

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**Patents Act 1977**  
**Examiner's report to the Comptroller under Section 17**  
**(The Search report)**

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**Relevant Technical Fields**

- (i) UK Cl (Ed.N)      G5R (RHB, RQA); B8M (MFBA, MFEX, MFF, MFX)
- (ii) Int Cl (Ed.6)      G11B 15/02, 20/00, 23/04, 23/087, 23/28, 23/30; G04G 15/00

Search Examiner  
 P R SLATER

Date of completion of Search  
 8 DECEMBER 1995

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-  
 1-3

(ii) ONLINE: WPI

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Category	Identity of document and relevant passages	Relevant to claim(s)
A	WO 93/10536 A1 (TSAI)	
A	WO 93/08571 A1 (THOMSON-BRANDT)	
A	WO 93/08568 A1 (THOMSON-BRANDT)	
A	WO 89/10615 A1 (BBC CORPORATION)	
A	US 4935611 A (YANIV)	
A	US 4841386 A (DEUTSCHE AG)	

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